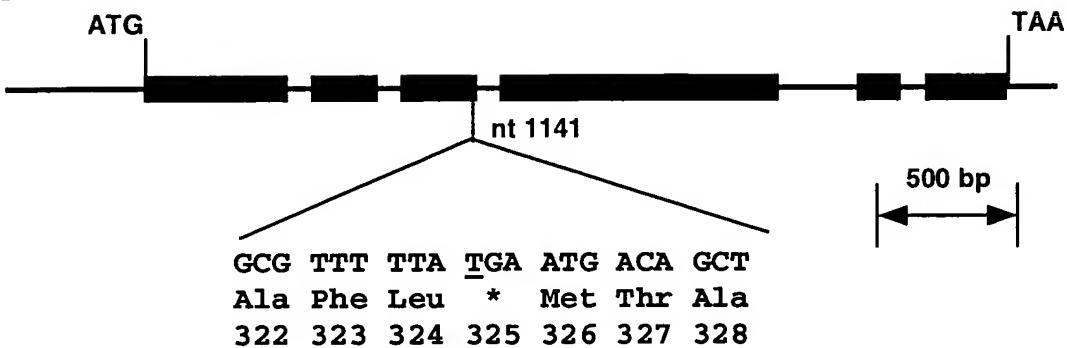




## **“Replacement Sheet”**

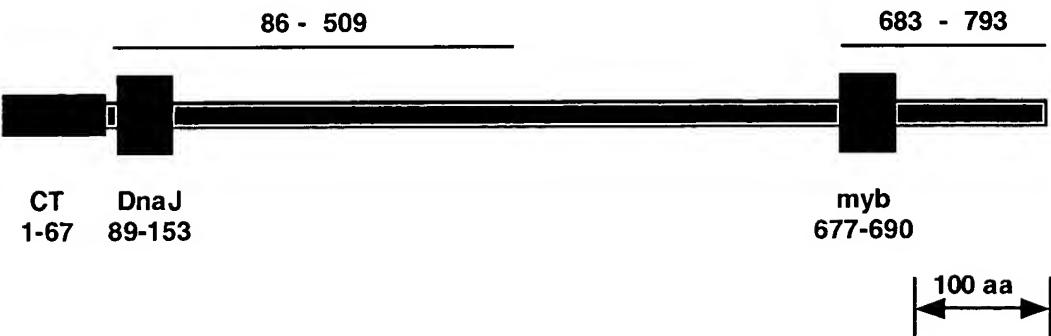
**FIG. 1A**

A



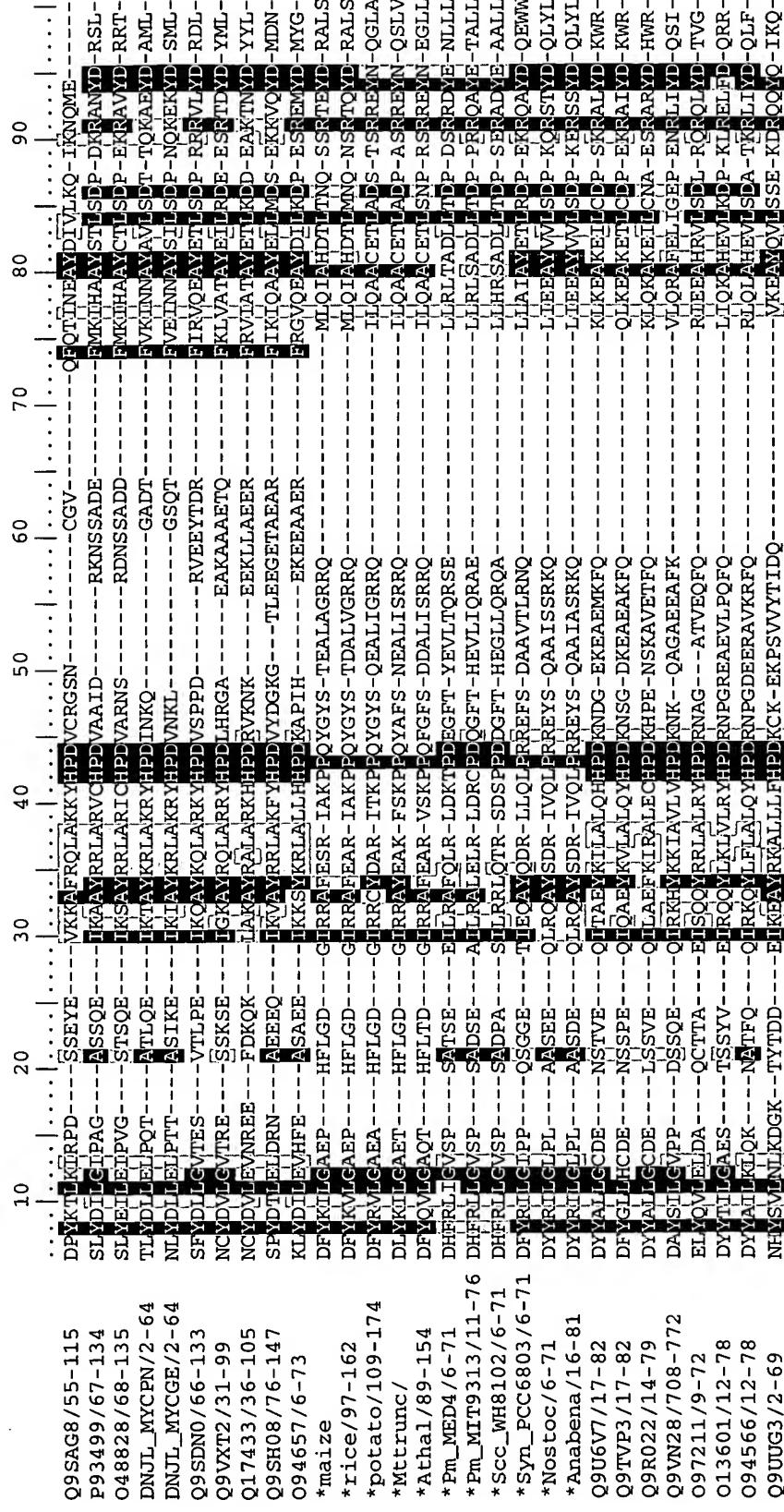
**FIG. 1B**

B



## **“Replacement Sheet”**

FIG. 2



## **"Replacement Sheet"**

FIG. 3A

Anabena	6	QGRYAVRTPDLYWRLGLPLAASDQEOTIROAYSRTVOLPURREYSOAAATASRKOLTEEAYVVISDPKERSSYDOLYLAHAYDPD~NAATTKVYAVENRGDSN	310	320	330	340	350	360	370	380	390	400
Nostoc	1	-----MRLPDLVYRILGLPLAASEEOTIROAYSRTVOLPURREYSOAAATASRKOLTEEAYVVISDPKERSSYDOLYLAHAYDPD~NLAAAAYAQNENRTTEST	197	198	199	200	201	202	203	204	205	206
Pm_MED4	1	-----MELPDEDHERLGVSPSATSEELRAOEIRDEKTPDGEETYEVLTSRSELLRLTADLTIDPDSRRTDYEMLLN-G-----HP-----EAL	192	193	194	195	196	197	198	199	200	201
Pm_MT9313	1	MAAOQNDLDPDIDHERLGVSPADSEAILRALLELRDRCPDGEETHEVILTORAELLRLSADDLTIDPDRROAYETALLELSRD-----HP-----EAL	187	188	189	190	191	192	193	194	195	196
Syn_PCC6803	1	-----MELPFDYRILGLIPQSGGETIECAVQDNLLQPLRREYRILQFPRREHNALATEARNRLIEQAEFVSOTEITRAYDHESGMFRSLVPSRKLPFDPDRSSDT	172	173	174	175	176	177	178	179	180	181
SCC_PCC7002	1	-----TWRLEPDYRILCVPAKATAQITCAYDRLRISQFPRREHNALATEARNRLIEQAEFVSOTEITRAYDHESGMFRSLVPSRKLPFDPDRSSDT	167	168	169	170	171	172	173	174	175	176
SCC_WH8102	5	GDLWLTDEPDYRILGVSPASPADSILRLQIERSDSPPDGTHEGLLQROQALIHSRSLDFTDPSERADYEAALLSSAT-----HP-----EAL	152	153	154	155	156	157	158	159	160	161
rice	87	AAERSKPLQVDFKVLGAEPHFLGEGIRRAEEFRAKFPQYGSSTDALVGRROMIQIHDINQNSRTOYDRALESNR-----HP-----EAL	137	138	139	140	141	142	143	144	145	146
Athal	79	RPERHVTIDEFQVLAQATHFLTIGIRRAREYRISKPPQFGSSDDALISRRQILOAECTSNPRSRREYNGLLDE-----HP-----EAL	122	123	124	125	126	127	128	129	130	131
potato	99	FSDHHLQSMEDFRLVGAEEAHFLGEGIRRAEEFRAKFPQYGSQEAALIGRROLQIACTSNPRSRREYNGLAQE-----HP-----EAL	107	108	109	110	111	112	113	114	115	116
Anabena	105	NGHFEDYQSLSTIEVSSELIG-ATLTOELGEYELVLUKLGRNMTGNONGTASTRNGNHRTPEEFLDSSERPTDLITVALASLLELGREHQWQ--QGHYENAAAL	210	220	230	240	250	260	270	280	290	300
Nostoc	95	KRGSDTQSGLITEITQDDELVG-ATLTOELGEYELVLUKLGRPVLVKNKSATSSRKSNNLADEEYESAEHPDVLTVALACLELGREHQWQ--QGHYENAAI	192	193	194	195	196	197	198	199	200	201
Pm_MED4	75	-----GLDISSNREVA-GLIILWEQSKAEFKITRKALQPOTPALG-----SSREADLTLLAALTTSRDAATOEQD--QRSYNSAAD	182	183	184	185	186	187	188	189	190	191
Pm_MT9313	84	GE-----TAGLDYSPSREVA-GLIILFEANSHEVHLASOGLOPPOSPTLG-----SEREADLTLLAALTTSRDAATOEQD--QRSYNSAAD	172	173	174	175	176	177	178	179	180	181
Syn_PCC6803	79	GEALPLTTPELECSPEEIG-ALLTLLDGEYELVLUKWAAPYLKGKGKLVKEGKF-----GLPODYLSSVILAHWELSREOWL--OOHXYEOAAL	157	158	159	160	161	162	163	164	165	166
SCC_PCC7002	97	ELEALTAHOPTIDIAKDLLLGGGLLDDGEYELVLUKWAAPYLKGKGKLVKEGKF-----AVEIVEOELRCLLAHWELESREOWL--OOHXYEOAAL	142	143	144	145	146	147	148	149	150	151
SCC_WH8102	88	NE-----TVGLDLIAASEEVA-GLIILWEAGAALAEFQLARQEQPPQAPALG-----SGREADLTLLAALACRDAARDDEQQ--QRREYSAAQ	127	128	129	130	131	132	133	134	135	136
rice	165	EEALTMIDAWDKEAGEALAV-----GEOILLDRPDKR-----KODAVLAMALAYVDSLRSRJAMAASPPDVIGCCE-----HP-----EAL	112	113	114	115	116	117	118	119	120	121
Athal	157	EATVITDVPWDKVPG-ALCVQEGGETEIVLRVGEALLEKERLPKSF-----KODVWLMALAFLDVSRD-----AMALDPPDFITGYE	107	108	109	110	111	112	113	114	115	116
potato	177	-----FDTILTIPVFWWDKVPG-AMCV-----KODVWLMALAFLDVSRD-----AMALDPPDFITGYE	92	93	94	95	96	97	98	99	100	101

## **“Replacement Sheet”**

FIG. 3B

FIG. 3C

## **“Replacement Sheet”**

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